

the spar planes and orthogonal spar planes.

(c) The tests specified in paragraph (b) of this section are normally performed at the manufacturer's facility; but for those antennas that are very large and only assembled on-site, on-site measurements may be used for product qualification data. If on-site data is to be used for qualification, the test frequencies and number of patterns should follow, where possible, the recommendations in paragraph (b) of this section, and the test data is to be submitted in the same manner as described in paragraph (a) of this section.

(d) For each new or modified transmitting antenna over 3 meters in diameter, the following on-site verification measurements must be completed at one frequency on an available transponder in each frequency band of interest and submitted to the Commission.

(1) Co-polarized patterns in the elevation plane, plus and minus 7 degrees, in the transmit band.

(2) Co-polarized patterns in the azimuth and elevation planes, plus and minus 7 degrees, in the receive band.

(3) *System cross-polarization discrimination on-axis.* The FCC envelope specified in §25.209 shall be superimposed on each pattern. The transmit patterns are to be measured with the aid of a co-operating earth station in coordination with the satellite system control center under the provisions of §25.272.

(e) Certification that the tests required by paragraph (c) of this section have been satisfactorily performed shall be provided to the Commission in notification that construction of the facilities has been completed as required by §25.133.

(f) Antennas less than 3 meters in diameter and antennas on simple (manual) drive mounts that are operated at a fixed site are exempt from the requirements of paragraphs (c) and (d) of this section provided that a detailed technical showing is made that confirms proper installation, pointing procedures, and polarization alignment and manufacturing quality control. These showing must also include a plan for periodic testing and field installation procedures and precautions.

(g) Records of the results of the tests required by this section must be maintained at the antenna site or the earth station operator's control center and be available for inspection.

[58 FR 13419, Mar. 11, 1993]

§ 25.133 Period of construction; certification of commencement of operation.

(a) Each license for an earth station governed by this part shall specify as a condition therein the period in which construction of facilities must be completed and station operation commenced. Construction of the earth station must be completed and the station must be brought into regular operation within 12 months from the date of the construction permit and/or license grant except as may be otherwise determined by the Commission for any particular application.

(b) Each license for a transmitting earth station included in this part shall also specify as a condition therein that upon the completion of construction, each licensee must file with the Commission a certification containing the following information: The name of the licensee; file number of the application; call sign of the antenna; date of the license; a certification that the facility as authorized has been completed and that each antenna facility has been tested and is within 2 dB of the pattern specified in §§25.209, 25.135 (NVNG MSS earth stations), or §25.213 (1.6/2.4 GHz Mobile-Satellite Service and 2 GHz Mobile-Satellite Service earth stations); the date on which the station became operational; and a statement that the station will remain operational during the license period unless the license is submitted for cancellation. For stations authorized under §25.115(c) (Large Networks of Small Antennas operating in the 12/14 GHz bands) and §25.115(d) (User Transceivers in the Mobile-Satellite Service), a certificate must be filed when the network is put into operation.

(c) If the facility does not meet the technical parameters set forth in §25.209, a request for a waiver must be submitted and approved by the Commission before operations may commence.

(d) Each receiving earth station licensed or registered pursuant to § 25.131 must be constructed and placed into service within 6 months after coordination has been completed. Each licensee or registrant must file with the Commission a certification that the facility is completed and operating as provided in paragraph (b) of this section, with the exception of certification of antenna patterns.

[56 FR 24016, May 28, 1991, as amended at 58 FR 68059, Dec. 23, 1993; 59 FR 53327, Oct. 21, 1994; 65 FR 59142, Oct. 4, 2000]

§ 25.134 Licensing provisions of Very Small Aperture Terminal (VSAT) and C-band Small Aperture Terminal (CSAT) networks.

(a)(1) *VSAT networks operating in the 12/14 GHz bands.* All applications for digital VSAT networks with a maximum outbound downlink EIRP density of +6.0 dBW/4 kHz per carrier and earth station antennas with maximum input power density of –14 dBW/4 kHz and maximum hub EIRP of 78.3 dBW will be processed routinely. All applications for analog VSAT networks with maximum outbound downlink power densities of +13.0 dBW/4 kHz per carrier and maximum antenna input power densities of –8.0 dBW/4 kHz shall be processed routinely in accordance with Declaratory Order in the Matter of Routine Licensing of Earth Stations in the 6 GHz and 14 GHz Bands Using Antennas Less than 9 Meters and 5 Meters in Diameter, Respectively, for Both Full Transponder and Narrowband Transmissions, 2 FCC Rcd 2149 (1987) (Declaratory Order).

(a)(2) *Large Networks of Small Antennas operating in the 4/6 GHz frequency bands.* All applications for digital and/or analog operations will be routinely processed provided the network employs antennas that are 4.5 meter or larger in diameter, that are consistent with § 25.209, the power levels are consistent with §§ 25.211(d) and 25.212(d), and frequency coordination has been satisfactorily completed. The use of smaller antennas or non-consistent power levels require the filing of an initial lead application (§ 25.115(c)(2)) that includes all technical analyses required to demonstrate that unacceptable interference will not be caused to

any and all affected adjacent satellite operators by the operation of the non-conforming earth station.

(b) *VSAT networks operating in the 12/14 GHz bands.* Each applicant for digital and/or analog VSAT network authorization proposing to use transmitted satellite carrier EIRP densities in excess of +6.0 dBW/4 kHz and +13.0 dBW/4 kHz, respectively, and/or maximum antenna input power densities of –14.0 dBW/4 kHz and maximum hub EIRPs of 78.3 dBW and –8.0 dBW/4 kHz per carrier, respectively, shall conduct an engineering analysis using the Sharp, Adjacent Satellite Interference Analysis (ASIA) program. Applicants shall submit a complete description of those baseline parameters they use in conducting their analysis and tabular summaries of the ASIA program's output detailing potential interference shortfalls. Applicants shall also submit a narrative summary which must indicate whether there are margin shortfalls in any of the current baseline services as a result of the addition of the new applicant's high power service, and if so, how the applicant intends to resolve those margin shortfalls. Applicants shall submit link budget analyses of the operations proposed along with a detailed written explanation of how each uplink and each transmitted satellite carrier density figure is derived. Applicants shall provide proof by affidavit that all potentially affected parties acknowledge and do not object to the use of the applicant's higher power density.

(c) Licensees authorized pursuant to paragraph (b) of this section shall bear the burden of coordinating with any future applicants or licensees whose proposed compliant VSAT operations, as defined by paragraph (a) of this section, is potentially or actually adversely affected by the operation of the non-compliant licensee. If no good faith agreement can be reached, however, the non-compliant licensee shall reduce its power density levels to those compliant with the VSAT Order or the Declaratory Order, whichever is applicable.

(d) An application for VSAT authorization shall be filed on FCC Form 312, Main Form and Schedule B. A VSAT licensee applying to renew its license